

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group II, claims 10-17, in the reply filed on 24 October 2007 is acknowledged.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10-15, 23-25 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Erko et al (US patent 7,038,416).

The patent to Erko discloses the invention as is claimed, including a floor maintenance machine (fig.2) for engaging and acting on a floor (24). The machine includes a tool motor (16) within assembly (10), a power source (30, which can be batteries), a power selection switch (70) for selecting desired operating power, an actuator (20) for exerting force upon the assembly (10) and a feedback control system (360, which can be microprocessor based). The control system digitally compares the measured motor power to a selected desired operating power and automatically adjusts the force exerted by the actuator to either increase or decrease the tool motor power to reach the desired operating power. Note that Erko discloses monitoring both motor load current and voltage provided by the power source to the motor.

With respect to claims 12 and 24, note column 6, lines 49+. Erko discloses that the controller is configured to respond to a variation in the monitored load current only if the variation has persisted longer than a given time amount. Such is considered to constitute a threshold power error.

With respect to claims 14 and 27, note column 6, lines 30+. Erko discusses compensation in the control to account for voltage decay over time as occurs with batteries.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erko et al (US patent 7,038,416).

The patent to Erko discloses all of the above recited subject matter with the exception of the feedback control system taking into consideration the tool motor efficiency.

While Erko does not discuss tool motor efficiency, such appears an obvious variation of the Erko controlling scheme. Erko sets forth in column 6, lines 27+ that the controller may be configured to vary the work output in accordance with other parameters. One of skill in the art would by routine experimentation employ any well known parameter, such as motor efficiency, to enhance the control of the brushing.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erko et al (US patent 7,038,416) in view of Kaczmarz et al (US patent 6,163,915).

The patent to Erko discloses all of the above recited subject matter with the exception of the floor maintenance tool including a frame supporting the tool motor and a propulsion motor mounted to the frame to drive wheels to move the maintenance tool.

The patent to Kaczmarz discloses a floor maintenance tool (1) that includes a frame (not numbered but disclosed), a propulsion motor (not numbered but disclosed) mounted to the frame for driving drive wheels (4). Drive motor (11) coupled with the frame drives the brush pad (13) for conditioning a surface.

It would have been obvious to one of skill in the art to provide the system of Erko on a movable frame, as clearly suggested by Kaczmarz, to enable easy moving of the floor maintenance appliance over the surface to be cleaned or otherwise treated.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary K. Graham whose telephone number is 571-272-1274. The examiner can normally be reached on Tuesday to Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary K Graham/

Primary Examiner, Art Unit 3723

GKG
06 January 2008